#### **DATE:** February 2004 Exhibit R-2, RDT&E Budget Item Justification APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE RDT&E, Defense-Wide/07 Defense Information Infrastructure Engineering & Integration PE 0302019K COST (in millions) FY03 FY04 FY05 FY06 FY07 FY08 FY09 Total Program Element 6.802 2.423 2.517 2.581 2.652 2.713 2.777 Global Information Grid Systems 2.328 2.423 2.517 2.581 2.652 2.713 2.777 Engineering & Support/T62 \* \* 0 Modeling & Simulation/E62 4.474 0 0 0

A. <u>Mission Description and Budget Item Justification</u>: This program element funds efforts involving the following areas: the development and fielding of the Global Information Grid (GIG) Enterprise Services, engineering support of the GIG including resolution of critical interoperability and technical integration issues, and the assessment of C4I initiatives that reside on the GIG to ensure compatibility, interoperability and technical integration. This program element is under Budget Activity 07 because it involves efforts supporting operational systems development.

\*\* Modeling and Simulation has been retitled Technical Integration Services and realigned to PE 0303149K, C4I for the Warrior.

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Exhibit R-2, RDT&E Bud	get Item Justifica	ation		DATE: February 2004
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07		Defense I	NOMENCLATURE nformation Inf on PE 0302019K	rastructure Engineering &
3. Program Change Summary:				
	FY 03	<u>FY 04</u>	FY 05	
Previous President's Budget	7.325	2.460	2.523	
Current President's Budget	6.802	2.423	2.517	
Total Adjustments	-0.523	-0.037	-0.006	
Change Summary Explanation:				
FY 2003 change due to below thresh	nold reprogramming	·		
FY 2004 change due to undistribute		eductions to	the Defense-v	wide RDT&E appropriation.
	cal guidance.			

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Exhibi	t R-2a, RI	DT&E Project	Justificat:	ion		DATE:	February 20	004
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07		M ELEMENT gineering & : OK	Integration,	PE	Global Inf	<b>ME AND NUMBE</b> ormation Gri g and Suppor	ld (GIG) Sys	tems
COST (in millions)		FY03	FY04	FY05	FY06	FY07	FY08	FY09
GIG Systems Engineering and Support/T62		2.328	2.423	2.517	2.581	2.652	2.713	2.777

A. <u>Mission Description and Budget Item Justification</u>: Efforts under this project will strengthen critical Global Information Grid (GIG) foundation technologies and programs through application of precise, short-term, technical, engineering and integration expertise. Provides expertise in support of the major GIG components, which include: GIG Enterprise Services, DOD Data Emporium, Defense Information System Network (DISN), Defense Message System (DMS) and medium grade messaging, Global Combat Support System (GCSS), Global Command and Control System (GCCS), DoD Directory Services (e.g., global directory services to locate people and equipment across the Department), GIG Public Key Infrastructure (PKI), enterprise management, Information Assurance (IA) and other related components. This project supports the definition and implementation of various aspects of evolving the GIG. The evolution of the GIG requires coordinated implementation of the GIG components to form a coherent global information grid. This project supports definition of the common environments, developing system architecture constructs for the GIG and components, providing engineering design and guidance for component evolution, including incorporation of new technology from industry and implementing the infrastructure capability. Subtasks are assigned based on need to address specific technical problems, mitigate risks and take advantage of cross-program synergies.

Exhib	Exhibit R-2a, RDT&E Project Justification										
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07						PROJECT NAME AND NUMBER Global Information Grid (GIG) Systems Engineering and Support/T62					
COST (in millions)		FY03	FY04	FY05	FY06	FY07	FY08	FY09			
GIG Systems Engineering and Support/T62		2.328	2.423	2.517	2.581	2.652	2.713	2.777			

# B. Accomplishments/Planned Program:

Subtotal Cost  $\frac{\text{FY } 03}{1.506}$   $\frac{\text{FY } 04}{1.780}$   $\frac{\text{FY } 05}{1.83}$ 

GIG Component Support - This task area supports multiple GIG components engaged in specific technologies to include wireless technology investigations and a Wireless Application Framework, network operations common operational picture (NetOPS COP), technology reconnaissance (e.g., publish/subscribe prototyping, semantic Web), targeted analysis of leading edge software components, architectures, and enterprise services (ES) across networks. Specific tasks include technical research and analysis on wireless technologies, security, IPv6, and application frameworks; quick response on assessments of technology such as persistent technology; identification of new state-of-the-art technologies that have promising applications such as semantic Web.

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Exhibi	t R-2a, RI	OT&E Project	Justificat	ion		DATE:	February 20	004
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07		I ELEMENT sineering & : K	Integration,	PE	Global Inf	<b>ME AND NUMBE</b> ormation Gri g and Suppor	ld (GIG) Sys	tems
COST (in millions)	•	FY03	FY04	FY05	FY06	FY07	FY08	FY09
GIG Systems Engineering and Support/T62		2.328	2.423	2.517	2.581	2.652	2.713	2.777

 FY 03
 FY 04
 FY 05

 Subtotal Cost
 .470
 .514
 .540

GIG Integration - This task area concentrates on the technologies and processes needed to ensure all parts of the GIG can smoothly work together. Technology enhancement activities include individual tasks such as end-to-end systems engineering for GIG Enterprise Services, developing enterprise services (ES) definitions and identifying the integration between services and mission applications; continued technical support to the Chief Engineers Panel (CEP); Public Key Infrastructure and Single Sign-on technology support; and providing analysis related to integration within the GIG components and among GIG and Service/Agency-level components.

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Exhib	DATE:	DATE: February 2004					
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07	PROJECT NAME AND NUMBER Global Information Grid (GIG) Systems Engineering and Support/T62						
COST (in millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09
GIG Systems Engineering and Support/T62	2.328	2.423	2.517	2.581	2.652	2.713	2.777

Cross Program Integration Engineering - Task areas include the continued collaboration with Air Force, Army, and Navy programs to coordinate interoperable solutions; continued support of information exchanges with the Services, OSD, the Combatant Commanders, and the Joint Staff to identify opportunities, issues, and solutions to improve DISA products; and facilitation and harmonization of cross-corporate programs relative to DISA programs and the GIG. Interchange allows DOD to leverage achievements and benefit from learning opportunities across the Department. Task includes participation and support of multiple forums engaged in the furtherance of DISA and DoD initiatives. These include bi-weekly meetings of the GIG Council (a cross-corporate council of directors that share information and resolve issues related to GIG components); opportunities for technology reuse, incorporation, and standardization, and participation and provision of technical analysis to the Family of Interoperable Operational Pictures (FIOP) effort that seeks to find, promote, and identify opportunities to simplify the operational picture across C2 systems; and continued work to facilitate cross-corporate harmonization of programs relative to DISA programs and the GIG.

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#### **DATE:** February 2004 Exhibit R-2a, RDT&E Project Justification PROGRAM ELEMENT APPROPRIATION/BUDGET ACTIVITY PROJECT NAME AND NUMBER RDT&E, Defense-Wide/07 DII Engineering & Integration/PE Global Information Grid (GIG) Systems 0302019K Engineering and Support/T62 COST (in millions) FY03 FY04 FY05 FY06 FY07 FY08 FY09 GIG Systems Engineering and Support/T62 2.328 2.423 2.517 2.581 2.652 2.713 2.777

C. Other Program Funding Summary: O&M, DW

FY03 FY04 FY05 FY06 FY07 FY08 FY09 341 342 342 342 341

D. Acquisition Strategy: MITRE, McLean, VA

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Exhibit R-3 Cos	t Analysis									DATE: Fel	bruary 2004	
	APPROPRIATION/BUDGET ACTIVITY  RDT&E, Defense-Wide/07  DII Engineering & Integration/PE 0302019K						Globa	al Ini			G) Systems	
Cost Category	Contract Method <u>&amp; Type</u>	Performing Activity & Location	Total PYs <u>Cost</u>		FY 04		FY 05	FY 05 Award <u>Date</u>	Cost To Complete	Total <u>Cost</u>	Target Value of <u>Contract</u>	
Engineering/Tech Svcs	Other Than Full & Open CPFF	MITRE McLean, VA	6.221		2.423	Various	2.517	Various	Contg	Contg	Contg	
				Page 8	of 17							

Appropriation/Budge RDT&E, Defense-V	et Ac Vide	ctivi e/07	ty						D								er an on/Pl							Glo	rojeo bal Syste	Infor ms l	ma Eng	tion	Gric ring	d (G	IG)	
						2	003			2	004			2	005			20	06	•		200	7			20	08			2	009	
Fiscal Year	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
GIG Components Spt -Wireless Investigations and Application Framework -NetOps COP						$\triangle$	$\triangle$	$\land$		<u> </u>	$\wedge$	$\triangle$		^	$\setminus \wedge$	$\wedge$				$\wedge$		<u> </u>	$\triangle$	$\triangle$		$\triangle$		$\triangle$	_		$\wedge$	$\triangle$
-Technology Reconnaissance -Targeted Engineering Analys						•					_	^		٨	^		^	•	٨	,	^	٨	•	•		^		_	_	٨		
GIG Integration -Chief Eng Panel -End-to-End SE for GES									$\triangle$					$\triangle$		$\triangle$						$\triangle$										
Cross Program Integration Engineering -GIG Council				4	$\triangle$	$\triangle$	$\triangle$		Δ,		$\triangle$		$\land$	$\triangle$	$\triangle$	$\triangle$	$\triangle$	$\triangle$	$\triangle$	$\triangle$	$\triangle$	$\triangle$	$\triangle$	$\triangle$		$\triangle$		$\triangle$				

Exhibit R-4a Schedule Detail						DATE: F	ebruary 2004
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07		ELEMENT ineering & I K	ID NUMBER ion Grid (C	GIG) Systems 52			
Schedule Profile F  GIG Components Support  -Wireless Investigations  & Applications Framework  -NetOps COP  -Technology Reconnaissance  -Targeted Engineering Analysis	Y 2003 1-4Q	<b>FY 2004</b> 1-4Q	<b>FY 2005</b> 1-4Q	<b>FY 2006</b> 1-4Q	<b>FY 2007</b> 1-4Q	FY 2008 1-4Q	<b>FY 2009</b> 1-4Q
GIG Integration -Chief Eng Panel -End-to-End SE for GES	1-4Q	1-4Q	1-4Q	1-40	1-40	1-40	1-4Q
Cross Program Integration Engineering -GIG Council	1-4Q	1-4Q	1-4Q	1-4Q	1-40	1-4Q	1-4Q
			Page 10 of	17			

Exhib:	it R-2a, RI	DT&E Project	Justificat	ion		DATE:	February 20	004
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07		M ELEMENT ineering & Int	egration/PE (	302019K		ME AND NUMBE Simulation/E62		
COST (in millions)		FY03	FY04	FY05	FY06	FY07	FY08	FY09
Project Cost		4.474	*					

- A. <u>Mission Description and Budget Item Justification</u>: The mission of this project is to support the successful deployment of DOD information systems by performing a broad spectrum of activities in support of C4I programs. DISA supports the development of C4I programs and systems through analytical and technical integration activities including application performance assessments; contingency planning; network capacity planning and diagnostics; system architecture development and evaluation; technical and operational assessment of emerging technologies; and systems-level modeling and simulation. DISA is a systems engineering and technical integration organization dedicated to solving problems for, and meeting the unique engineering, integration and analysis needs of its customers (Combatant Commands, Services, Defense Agencies, Office of the Secretary of Defense, and the Joint Staff).
- \* This project was retitled Technical Integration Services and realigned to PE 0303149K, C4I for the Warrior. The realignment of the project in FY04-09 reflects the need to perform a broad spectrum of analytical and technical integration activities beyond the Common Operating Environment to other warfighter C4I and transformation requirements. Greater detail is discussed in the narrative for this project under PE 0303149K.

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Exhib	it R-2a, RI	OT&E Project	Justificat:	ion		DATE:	February 20	004
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07		I ELEMENT neering & Int	egration/PE 0	302019К		ME AND NUMBE Simulation/E62		
COST (in millions)		FY03	FY04	FY05	FY06	FY07	FY08	FY09
Project Cost		4.474	*					

# B. Accomplishments/Planned Program:

FY2003 - DISA Ops Support provided improvements to operational effectiveness, network performance, and end-to-end visibility through network instrumentation, performance management tools, near-real-time prediction, capacity planning, and visualization tools. Served as the technical integrator and implementer of network operations. Supported the successful implementation and integration of network operations management tools for the DISA Global network operations and security center.

FY2003 - Warfighter & Combatant Commands Support provided: (a) support for the warfighter by performing traffic data collection, analysis, and assessments for USCENTCOM, US Pacific Command, US Forces Korea (USFK), Joint Forces Command, and DISA Field Offices in the theater of operations; and traffic collection and analysis support for the GCCS-Korea network. This task included efforts to integrate USFK traffic-performance metrics into a theater-wide view.

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Exhibi	t R-2a, RI	OT&E Project	Justificat	ion		DATE:	February 20	004
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07		I ELEMENT neering & Int	egration/PE (	)302019K		<b>ME AND NUMBE</b> Simulation/E62		
COST (in millions)		FY03	FY04	FY05	FY06	FY07	FY08	FY09
Project Cost		4.474	*					
FY 03 Subtotal Cost 1.540	FY 0	<u>FY 0</u>	5					

FY2003 - Community Support provided modeling support for design of "Blue" communication scenarios for the Joint Warfare System (JWARS); and configuration management support and verification and validation review of the Network Warfare System (NETWARS). These networks assist DISA and the office of the Joint Chiefs of Staff (JCS) with NETWARS, which is the JCS communication model and has representations for military networks and the information flows required to execute military missions. Also supported DOD's Program Analysis and Evaluation directorate with JWARS.

FY2003 - DISA Program Support (a) provided DISN/Global Information Grid (GIG) performance assessments for existing and transitioning networks, applications and technology, and developed recommendations for network performance improvement, survivability and reliability; (b) conducted end-to-end system performance assessment for Defense Message System (DMS), GIG, and Global Command and Control System (GCCS); (c) completed systems architectural support for the Composite Health Care System (CHCS) by identifying opportunities to increase availability, decrease response time and decrease costs. This study has the potential of saving millions of dollars over the present plan as well as contributing to the operational improvement of the system. Provided end-to-end applications instrumentation and modeling for the DOD Common Access Card (CAC). Also, initiated the Telecommunication Services Management (TSM) effort to improve the DISA telecommunications service process. The TSM is an end-to-end improvement for accurate and timely customer billing, improved services delivery time, enhanced customer service and satisfaction, and a timelier cost recovery period.

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Exhibi	it R-2a, RI	DT&E Project	Justificat	ion		DATE:	February 20	004
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07		M ELEMENT ineering & Int	egration/PE 0	302019К		ME AND NUMBE Simulation/E62		
COST (in millions)		FY03	FY04	FY05	FY06	FY07	FY08	FY09
Project Cost		4.474	*					

C. Other Program Funding Summary: (\$M)

	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	Complete	Cost
RDT&E, DW (PE0303149K)	0	$1\overline{1.275}$	10.248	$1\overline{1.764}$	$1\overline{1.997}$	12.227	12.498	Contg	Contg
O&M, DW	14.521	16.326	11.833	21.482	22.024	22.861	23.475	Contg	Contg

D. Acquisition Strategy: Will continue under existing contract vehicles.

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Exhibit R-3 Cost Analy	ysis									DATE:	February 2004
APPROPRIATION/BUDGET ARDT&E, Defense-Wide/07	ACTIVITY	PROGRAM E			ration/	PE 0302	2019K		<b>T NAME AND</b> g & Simulati		
Cost Category		Performing Activity & <u>Location</u>	Total PYs <u>Cost</u>	FY 04 Cost	FY 04 Award <u>Date</u>	FY 05 Cost	FY 05 Award <u>Date</u>	Cost to Complete	Total \	Target /alue of Complete	
Technical Integration Services	CPFF	Veridian McLean, VA	.340					N/A	.340	.340	
		RAND Tyson Corner, VA	.500					N/A	.500	.500	
	CPFF	OPNET Tech, Inc. Bethesda, MD	.688					N/A	.688	.688	
		SAIC San Diego, CA	.916					N/A	.916	.916	
	CPFF	Booz-Allen Hamilto McLean, VA	on 1.267					N/A	1.267	1.267	
Equipment	FP	DELL Round Rock, TX	.150					N/A	.150	.150	
Technical Integration Services		Various Contracts	<u>.613</u>					N/A	.613	.613	
Subtotal Product Development			4.474								
Total Costs			4.474								
					Page	15 of 1	7				

Appropriation/Budget Activity RDT&E, Defense-Wide/07			Program Element Number and I DII Engineering & Integration/PE 0									nd N E 03	I Name 0302019K					P M	Project Number and Name Modeling & Simulation/E62								
Final Varia	2003			2004				2005				2006					200	7		2008				2009			
Fiscal Year	1 2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Support to DISA Ops Warfighter & COCOM Support C3 Community Support																											
DISA Program Support																											

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Exhibit R-4a Schedule	Exhibit R-4a Schedule Detail												
APPROPRIATION/BUDGET A RDT&E, Defense-Wide/07	CTIVITY	PROGRAM ELEMENT DII Engineering		n/PE 0302019K	NAME AND N								
Schedule Profile	FY 2003	FY 2004	FY 2005	FY 2006	F	Y 2007	FY 2008	FY 2009					
Support to DISA Ops	1-4Q												
Warfighter& COCOM Sup	1-4Q												
C3 Community Support	1-4Q												
DISA Program Support	1-40												
			Dage	e 17 of 17									